

CHAPTER SIX: A SYSTEMATICS FOR CULTURAL LANDSCAPES

6.1 Sub-problem Five - Could the systematics for South African cultural landscapes be formed by developing policies (sub-problems one and two), by characterising cultural landscapes (sub-problem three) and by defining displayable parameters (sub-problem four)?

A workable systematics must at minimum meet the legal standards, but should also comply with the requirements of a systematics, as is determined in the four previous Chapters of this study.

The introduction of this thesis listed a set of delimitations and assumptions that must be reconsidered so as to represent the findings of the thesis. One of the assumptions states "the peculiarities among cultures define them". This is still regarded as valid, however, it was found that it is the similarities among them that provide parameters for a pragmatic systematics. For instance the study of the international legislation revealed that similar cultures value similar cultural aspects, (**Appendix Nine**). They express these aspects in a manner unique to their culture, but the cultural topic could be interpreted as universal. Murdock³⁴³ attempted such a universal classification, as presented in Chapter Three, but this study added descriptive terminologies after the review of other sources. A new list is produced in this chapter that can be considered as a comprehensive reference list for South African conditions.

Chapter Two showed that under the South African national policy, four acts and one international declaration, to which South Africa is a signatory, are relevant to the conservation of heritage and should be considered when developing a systematics for cultural landscapes. These are:

- a. The National Heritage Resources Act, No. 25 of 1999, that guides the protection and management of cultural heritage;
- b. National Environmental Management Act, No. 107 of 1998, that require the consideration of biophysical and cultural significance in management,
- c. Environment Conservation Act No 73 of 1989 that requires an Environmental Impact Assessment to include a heritage assessment,
- d. The Mineral Act no 50 of 1991, that requires a heritage assessment and,
- e. The National State of the Environment, in particular the application and compliance

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to Agenda 21 that requires sustainability indicators be developed to indicate the level of compliance on a local level.

Of these the National Heritage Resources Act has clear requirements to which a systematics must apply, but it is not clear what the process should be by which a systematics should be developed or in what manner such a systematics must be applied. However, the findings in Chapter Four showed that the requirements could be satisfied within a relational database model.

Chapter Three showed that international charters and systematics struggle with similar difficulties as those of the South African systems, and are often filled with process and application with little regard for the meanings of terminology or what the various interpretations might be. The Burra Charter, the San Antonio Charter and the Nara Document provide guidelines that could be incorporated into a South African Systematics for Cultural Landscapes.

Chapter Four shows that the difficulty of applying a western notion of evaluation, classification, or management to aboriginal or autochthonous values is omnipresent in all nations where various cultures live together with their histories and pasts. The three case studies that were reviewed provided valuable insight into the similarities in heritage in South Africa. Although the character and context of the three sites are vastly different the cultural topics are compatible and unifying. The South African National Parks current system of cultural mapping is comprehensive and attempts to provide an alternative for the traditional bio-physical heritage focus of the Parks. Valuable aspects of the system can be incorporated into a comprehensive and pragmatic systematics for cultural landscapes.

In Chapter Five the various methods and options for mapping and database production was reviewed. It is clear from the literature review and from the review of the policy requirements that a geo-referenced spatial database linked to a relational model will be the most appropriate and wide-ranging method to systematise the characteristics of cultural landscapes.

Finally, as a check to these four chapters, a discussion is offered to address the general philosophy on the tone and type of systematics for indigenous cultural landscapes. This is deemed necessary to ensure an appropriate approach to the systematics. The discussion addresses the definition of culture and landscape, the nature of associative landscapes,

³⁴³ Murdock. 1945

and the intangible values and identities.

6.1.1. Defining Cultural Landscapes within the realm of world heritage.

The concept of cultural landscapes is a relatively new one in the heritage conservation movement, but in the past ten (10) years it has emerged as a significant way of looking at place that focuses not on monuments but on the relationship between human activity and the biophysical environment. After nearly a decade of debate, in 1992 the World Heritage Committee, the administrative body for the World Heritage Convention, adopted a definition for cultural landscapes of outstanding universal value. The members agreed that:³⁴⁴

cultural landscapes represent the combined works of nature and of man illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.

Its three main categories:

- a. the clearly defined landscape designed and created intentionally by man,
- b. the organically evolved landscape: relic or continuing, and
- c. the associative cultural landscape

provide an identification of types that can encompass the wide range of cultural landscapes around the world.

In the years since cultural landscapes were added to the list of properties eligible for nomination to the World Heritage List, designed, organically evolved, and associative cultural landscapes have all been inscribed. Many landscapes embody characteristics of all three types. In the designed landscape, however, it is anticipated that aesthetic considerations will prevail over other values. By virtue of their organic nature and human use over time, all landscapes may be said to have evolved. The essence of the organically evolved cultural landscape, whether relict or continuing, is that its most significant values lie in the material evidences of its evolution from a cultural initiative to its present form, in association with the biophysical environment.

6.1.2 Associative Cultural Landscapes

Associative cultural landscapes mark a significant move away from conventional heritage concepts rooted in physical resources, whether the monuments of cultural heritage or wilderness in biophysical heritage. The indivisibility of cultural and biophysical values in cultural landscapes is accentuated. While many landscapes have religious, artistic or

³⁴⁴ <http://www.unesco.org/whc/archive/nara94.htm> 19/05/01 16:20:55 PM.

cultural associations, their associations are with the biophysical environment rather than by their material evidences, which may be minimal or entirely absent, distinguish associative cultural landscapes. The range of biophysical features associated with cosmological, symbolic, sacred, and culturally significant landscapes may be very broad. They include: caves, coastal waters, groves, hillsides, lakes, mountains, outcrops, plains, pools, rivers, trees, uplands, or woods. A 1995 workshop on associative cultural landscapes, held in the Asia-Pacific region³⁴⁵

where the link between the physical and spiritual aspects of landscape is so important

elaborated on their essential characteristics.

Associative cultural landscapes may be defined as large or small contiguous or non-contiguous areas and itineraries, routes, or other linear landscapes - these . may be physical entities or mental images embedded in a people's spirituality, cultural tradition and practice. The attributes of associative cultural landscapes include the intangible, such as the acoustic, the kinetic and the olfactory, as well as the visual.

6.1.3 Intangible Values and Identity

As noted earlier, the concept of 'cultural landscapes' has become widely accepted internationally by diverse heritage bodies. While individual definitions vary, their direction focuses consistently on the inter-relatedness between human society and the biophysical environment.

Leading participants in the international heritage movement have overtly recognised cultural landscapes that are characterised by the intangible values that indigenous peoples attach to landscape. In the according of heritage status to places with spiritual associations in the absence of material remains, there is the acknowledgement of human values as crucial to the identities of these peoples. Also explicitly accepted is that the associated peoples identify such places and values.

³⁴⁵ <http://www.unesco.org.whc/archive/cullen95.htm>. 5/25/01 7:26 PM

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Writing for the Australian Heritage Commission for the 1996 State of the Environment Report, Jane Lennon³⁴⁶ finds that, in general:

A common thread running through the definitions [of cultural landscapes] is the human use of the landscape and how we see the resultant cultural landscape as an expression of past human attitudes and values.

The relationship between people and place has created patterns in the landscape in addition to those created by the operation of biophysical systems. Landscape is seen primarily as a cultural artefact, consisting of the tangible remains left on the land by present and earlier cultures. These tangible remains form layers in the landscape. Within the layers are human meanings related to the fact that landscapes are a record of history where memory, symbolism and signs of the past, as well as tangible physical remains, are held. Herein lies the basis for contemporary cultural significance found in landscapes because meanings are at the heart of community attachment to places and to the development of cultural heritage values

It is the intention of the systematics as proposed herewith to honour these expressions and to provide a systematics that will enable the understanding of the importance of cultural landscapes and to set in place a pragmatic systematics for use among all people in southern Africa.

6.2 Addressing Hypothesis Five. The systematics of the South African cultural landscapes can be formed and can be described by a set of displayable parameters.

In this final hypothesis, distinctly unique yet suitable methods are implemented to incorporate the systematics for cultural landscapes. These methods display both descriptive and graphic spatial data. The systematics recognises that attributes, credibility and context varies among cultures. It is recognised by this thesis that it is not possible to operate a credible systematics with rigid procedures or evaluation criteria. To accommodate the required flexibility, the procedures and systematics are adaptable to be used by all the cultures of South Africa. This section thus compiles a systematics that is both representative of the South African condition and accommodating through drawing on those systems and applications suitable to these requirements. The premise is that a systematics for cultural landscapes must comply with the requirements of the relevant

³⁴⁶ Lennon 1996

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South African acts and declarations. A correlation between the focus and contents of these initiatives, regulations, acts and intentions are thus required to determine how the systematics must be developed to meet these.

6.2.1 Defining southern African Cultural Landscapes

The number of definitions for "cultural landscapes" is probably as large as the cultures of the world. This study did not aim to find all the definitions, but selected those that could begin to inform a definition for southern African cultural landscapes.

In 1992 the World Heritage Committee³⁴⁷, the administrative body for the World Heritage Convention, adopted a definition for cultural landscapes of outstanding universal value. It states that:

Cultural landscapes represent the combined works of nature and of man, illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.

The US National Park Service, *Cultural Resource Management Guideline NPS 28*³⁴⁸, states that: *A cultural landscape is a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.*

It identifies four types of cultural landscapes:

- a. historic designed landscapes, which represents a garden or landscape that was designed for a specific goal by a landscape architect, architect or garden designer,
- b. historic vernacular landscapes, which represents a garden or landscape that developed from local skills and out of functional necessity,
- c. historic sites, which represents the monuments and built artefacts honouring a person, group or nation, and
- d. ethnographic landscapes, which is described as a landscape containing a variety of natural and cultural resources that associated people define as heritage resource.

Parks Canada³⁴⁹ defines cultural landscapes as:

Any geographical area that has been modified, influenced, or given special cultural meaning by people.

³⁴⁷ UNESCO, 1996

³⁴⁸ (<http://www.nps.gov/planning/petr/appdxg.htm>).

³⁴⁹ Parks Canada, 1994:p. 119

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The national Australian Heritage Commission³⁵⁰ recognizes the 'unique position of indigenous heritage' and states that aboriginal people were the first Australians:

Their heritage is intimately linked with the landscape, beliefs, and customs. Indigenous people perceive the 'natural' environment as a cultural landscape which is the product of human activities over at least 60 000 years - time immemorial. Indigenous heritage includes those cultural landscapes and places, intellectual property, knowledge, skeletal remains, artefacts, beliefs, customs/practices, and languages that are important to Australia's indigenous people.

Definition of "place" in the ICOMOS New Zealand's new Charter for the Conservation of Places of Cultural Heritage Value³⁵¹ also enlarges the important earlier concept of Australia's Burra Charter (1998: sec.22). It states that:

place means any land, including land covered by water, and the airspace forming the spatial context to such land, including any landscape, traditional site or sacred place, and anything fixed to the land including any archaeological site, garden, building or structure, and any body of water, whether fresh or seawater, that forms part of the historical and cultural heritage of New Zealand.'

O'Hare³⁵² in his PhD thesis covered a vast number of meanings and definitions of landscape and culture. He says that the use of the term "cultural landscape" reminds us that landscapes are dynamic rather than static, active rather than passive, living rather than relict, and inhabited rather than devoid of human intervention.

At an attempt to find a suitable method for systematics O'Hare discusses the interpretation method that Lewis³⁵³ proposed in his seven "axioms" for reading the landscape. The seven axioms are summarised below:

- a. Landscape reflects culture - a change in the appearance of a landscape is likely to indicate a change in the national or regional culture. Convergence in the look of different regions indicates some convergence of culture.
- b. Individual elements of the landscape have generally equal importance as clues to culture.
- c. Common landscapes are difficult to study by more formal methods, hence popular and ephemeral literature may be important sources.
- d. To understand inherited landscape features, we must understand the cultural

³⁵⁰ Australian Heritage Commission, 1997

³⁵¹ New Zealand Department of Conservation, 1998

³⁵² O'Hare. 1997. p.21

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context of those who made them.

- e. Elements of a cultural landscape make little cultural sense if they are studied outside their locational context.
- f. Most cultural landscapes are intimately related to physical environment (climate, landform, soils, and such like).
- g. Cultural landscapes are difficult to interpret, unless we combine looking, reading and thinking about what we see.

O'Hare³⁵⁴ also offers his own definition for cultural landscapes:

The cultural landscape consists of a dialect between the natural physical setting, the human modifications to that setting, and the meanings of the resulting landscape to insiders and outsiders. The continuous interaction between these three elements takes place over time. The concept of cultural landscape therefore embodies a dynamic understanding of history, in which past, present and future are seamlessly connected

From the previous listings of definition, and the considerations of the study to this point, it is now possible to propose a definition³⁵⁵ of cultural landscapes for South Africa:

Cultural landscapes are tangible and intangible, dynamic, active, living, inhabited, sacred or spiritual places that consist of an articulation between the biophysical setting, human transformations and the meanings of the resulting landscape as expressed in events, activities, customs, beliefs, stories, or myths, which may be applied to traditional artefactual residue, wilderness or everyday landscapes representative of national identity, cultural groups or single cultures.

6.2.2 Proposing a Systematics

Herewith a comprehensive procedure is proposed that is representative yet adaptive and that meets the requirements of tangibility and intangibility, that considers the historical aspects, that recognises the evolution and changes of landscapes and that recognises the associative meanings of landscapes. The systematics is not meant to be sequential but accommodates parallel processes. The proposal included with amendments the requirements of the National Heritage Resources Act and comprises the following:

- a. Method of identification - according to indigenous knowledge or other.
- b. Method of recording, documentation, archiving and publishing - by appropriate

³⁵³ Lewis, 1979.

³⁵⁴ O'Hare. 1997. p.47

³⁵⁵ Compilation with reference to Helen Armstrong, Danny O'Hare, UNESCO, World Heritage Commission.

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- methods.
- c. Method of assessment - of significance or value for national, provincial or local level as per National Heritage Resources Act Chapter 1, Pa111, item 7.(1)(a)to(c) and 3(3)
 - d. Method of grading - according to National Heritage Resources Act Chapter 1 Part 1 item 3 (2)(a)to(l).
 - e. Method of management to include monitoring and maintenance, through conservation policies, conservation plan and implementation plan as per Chapter II, Part 3 of the National Heritage Resources Act.
 - f. Recommendations for research.

6.2.2.1 Method of Identification.

The preamble to the National Heritage Resources Act³⁵⁶ states that the Act encourages communities to nurture and conserve their legacy. The identification procedure and documentation of the application for the place or landscape to be considered for recognition as a cultural landscape must include a motivation statement. The motivational statement must be substantiated with facts about specific cultural topics and aspects to be considered. It is recommended that the following Table Thirteen be used as a starting point for identification of aspects and topics for discussion. The list is developed from the results of this study and is presented as being representative of all aspects of culture, in southern Africa and universally. The qualitative motivational criteria can be translated into quantitative answers for the purpose of classification or grading.

Table Thirteen. List of terminology for identification of cultural heritage and cultural landscapes associated with particular or numerous peoples.

Age groups	Ethics	Language	Sexual restrictions
Alphabet	Ethno-botany	Legal Structure	Singing
Ancestors	Expansion	Life styles	Slaves
Artistry	Fabrics	Luck superstition	Social standing
Athletics	Faith healing	Marriage	Soul concepts
Beliefs	Farming	Material use	Sports
Bio-physical features	Fire making	Mealtimes	Storage
Bio-physical threats	Food	Meaning	Story telling
Bodily adornment	Food taboos	Medicine	Struggles
Bravery	Funeral rites	Mining	Suicides
Chronology	Furniture	Music	Supernatural beings
Cleanliness	Games	Mystique	Superstition
Clothing	Gender	Obstetrics	Surgery

³⁵⁶ National Heritage Resources Act. No. 25 of 1999

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Communications	<i>Genius Loci</i>	Penal sanctions	Symbolism
Community organisation	Geographic location	Performance	Technology
Construction methods.	Gestures	Personal names	Threats
Co-operative Labour	Gift giving	Population policy	Tool making
Cosmology	Government	Possible extinction	Trade
Cultural links	Greetings	Postnatal care	Training
Currency	Habits	Pregnancy	Transportation
Dance	Hair styles	Products	Travelling
Dates of discoveries	Head coverings	Property rights	Utensils
Defence	History of place	Propitiations of supernatural things	War
Descendants	Hospitality	Puberty customs	Waste
Divination	Household	Punishment	Water
Division of labour	Hunting	Recording events	Wealth
Domestic animals	Hygiene	Related settlements	Weaponry
Dream interpretation	Incest taboos	Relationships	Weather control
Drink	Inheritance rules	Religious rituals	Weaving
Education	Inspiration to others	Rites of Passage	Wildlife
Elderly	Joking	Rituals	Writing
Eschatology	Kinship nomenclature	Settlement pattern	

6.2.2.2 Method of recording, documentation, archiving and publishing.

This study shows, as discussed in Chapter Four, that a relational model as applied in a geographic information system is the most suitable for the recording, compiling and managing of a database for a systematics. The items and criteria as identified in the National Heritage Resources Act can be displayed in a matrix to begin to address the relationship between the procedural requirements and the database requirements. Once placed in relationship to one another, it is possible to develop a set of criteria for the decision-making. The relationship can be tracked to ensure the substantiated completion of the overall systematics. It is necessary in this system that each of the relationships be considered and answered positively where a relationship exists and negatively where it is absent. It is thus possible to draw a correlation between procedural requirement and database requirements. (Table Fourteen)

As an example the following is offered:

Task: Gather enough information and populate the database to ensure informed decisions about the grading of a place.

Tracking: check that:

- the motivational statement was acquired and verified,
- it was adequately compiled,
- it was stored in an accessible database,
- it can be upgraded and changed,

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- it can be manipulated by system administrators,
- it can be easily retrieved by agency workers and the public, and
- an analysis component is added for agency use.

Table Fourteen. Relationships between procedural requirements and database requirements.

Procedural Requirements	Database Requirements	Acquisition and verification	Compilation	Storage	Updating and changing	Management and exchange	Manipulation	Retrieval and presentation	Analysis and combination
Identification									
Recording									
Assessment									
Grading									
Archiving									
Management									
Recommendations for research									

The existing Environmental Potential Atlas³⁵⁷ platform as commissioned by the Department of the Environment and Tourism (1996) and being completed by the University of Pretoria (completion date 2004) may offer a suitable collaborative option to use as a method of documentation for cultural landscapes. This atlas is being expanded to include a co-ordinated recording system and database for the inclusion of aspects of the cultural landscapes and published as a set of electronic databases for the whole of South Africa and is available on compact disk.

The purpose of documentation must be explicit prior to commencing any documentation process, and answering the questions for databases as stated in Chapter Four, item 4.1 are critical to proceeding with the design of the database. It is thus recommended that the database be an interactive, open system for dialogue that defines, organises and builds on intuitive, structured and procedural knowledge. Furthermore, it is recommended that the documentation method accomplish the requirements of the National Heritage Resources Act in Chapter 1 Part 2 Item 12 that necessitates the compilation of a well designed database. Parts of the database and its design could include the following components:

a. Acquisition and compilation.

Information can be acquired from numerous sources and in various formats. To foster an appreciation of indigenous knowledge, sources should be able to identify heritage as they see it or as it occurs in their communities. The following groups may be able to submit motivational statements regarding their heritage for

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consideration:

- i. Communities.
- ii. Educational institutions.
- iii. Professional institutions.
- iv. Special interest groups.
- v. National agencies.
- vi. Provincial agencies.
- vii. Municipal agencies.
- viii. Local and regional agencies.
- ix. Business organisations.
- x. Private individuals.

The compilation of data includes the capturing of data into a format that could be electronically accessed and updated. Under the National Heritage Resources Act, data must be captured by geographical area to be ultimately linked to a local, provincial or national heritage list or database. Geographical areas may include:

- i. The national boundary
- ii. One or several of the nine provincial boundaries,
- iii. One or several of the two hundred and sixty two demarcated municipalities.

b. Verification

Information regarding a heritage resource that is brought for consideration must be verified. This verification process can be accomplished by documentary research that includes the following:

- i. Fully explore the history of an area or particular place,
- ii. Establish historical context,
- iii. Identify significant places associated with historical, events, activities or people.
- iv. Talking to people in the community,
- v. Reading the local history in the library,
- vi. Reading the local news letters of the community, agency, or organisation,
- vii. Review local government documentation,
- viii. Review local death records,
- ix. Review correspondence and reports,
- x. Review sketches and watercolours,
- xi. Review ground photographs,

³⁵⁷ <http://www.environment.gov.za/docs/2000/enpat.9/24/01.6:56PM>

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- xii. Review contemporary and historical aerial photographs,
- xiii. Review ground photogrammetry
- xiv. Review maps, plans and surveys,
- xv. Review directories, catalogues,
- xvi. Complete an Internet search.

Another complementary method to verify information is by field research that includes:

- i. Focussing the area for site recording
- ii. Provide a thematic analysis in documentary and archival research
- iii. Identify chronological layering of themes and links between the layers as physically represented,
- iv. Identify chronological layering of themes and links between the layers as verbally represented,
- v. Alert researchers to historical associations not physically present or previously identified in the field,
- vi. Conduct oral interviews,
- vii. Aim to establish comparisons with places demonstrating similar historical themes,
- viii. Identify gaps in research and aim to fill these by going outside the local area or research groups.

c. Method of archiving and of publishing.

The National Heritage Resources Act requires the establishment of a national database or inventory of the National Estate. This list of sites is to include all categories according to Chapter 1 Part 1 item 3, and with its associated data could be stored in a national inventory.

It is proposed that all data be stored and updated by electronic means by the local, provincial and national agencies. These centrally located data bases could be designed to be password protected to allow various levels of access and manipulation of the databases. It is recommended that the local authorities complete the evaluation forms on the electronic system, and not on paper versions that must then be captured onto the database.

The databases could be designed with pre-determined queries, map displays and information release. Although it is not necessary to publish the database onto paper once it is completed in the electronic format, it is recommended that the list

and its associated data could be published once a year for archival reasons.

Similarly, the databases can be made available through the Internet to the public or to registered users. It is recommended that all evaluation and capturing of information regarding the potential places/landscapes be captured in electronic format. Only those applications to be prepared for evaluation for national designation should be paper copies.

Archival collections are national collections, and should be preserved, arranged, catalogued, and described in finding aids. They will be maintained and used in ways that preserve the collections and their context (provenance and original order) intact while providing controlled access. It is recommended that, with few legal exemptions, SAHRA would make archives and manuscripts available to researchers. Electronic documents that are to be preserved in archival and manuscript collections will be digitised so that the information contained within them remains accessible.

All documentation associated with natural and cultural resource studies and other resource management actions should be retained in the SAHRA collection for use in managing the resources over time. Local and Provincial authorities should retain notes or copies of records significant to their administrative histories when they periodically transfer their official records to national record centers.

6.2.2.3 Method of Assessment

The National Heritage Resources Act Chapter 1 item 3 identifies those heritage resources that could be considered as culturally significant or of other special value. The challenge to compiling a national estate or a local and provincial list heritage list is the ability to recognise, verify and authenticate the heritage for inclusion. The National Heritage Resources Act Chapter II, Part 1, 27 (2) requires a Provincial Heritage Resources Authority (PHRA) to identify those special places that have special qualities that makes them significant in a provincial or regional context. However, the Act also allows in item 27(3) for any person to submit a nomination to SAHRA or a PHRA for a place to be declared a national or provincial heritage site respectively. It is recommended that the evaluation procedure be completed with the classification procedure to establish in a related manner the category, the significance and the grading to be national, provincial and local (Table Fifteen).

Table Fifteen: Relationship of criteria for evaluation of significance against proposed National Heritage Resources Act categories.

Relationship of Criteria for evaluation of significance against proposed National Heritage Resources Act categories. Chapter 1, Part 1 item 3(2) and (3)	(a) its importance in the community, or pattern of South Africa's history;	(b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage	(c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage	(d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects	(e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group	(f) its importance in demonstrating a high degree of creative or technical achievement at a particular period	(g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	(h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa	(i) sites of significance relating to the history of slavery in South Africa
(a) places, buildings, structures and equipment of cultural significance									
(b) places to which oral traditions are attached or which are associated with living heritage (intangible)									
(c) historical settlements and townscapes									
(d) landscapes and natural features of cultural significance									
(e) geological sites of scientific or cultural importance									
(f) archaeological and palaeontological sites									
(g) graves and burial grounds, including									
(i) ancestral graves									
(ii) royal graves and graves of traditional leaders									
(iii) graves of victims of conflict									
(iv) graves of individuals designated by the Minister by notice in the <i>Gazette</i>									
(v) historical graves and cemeteries; and									
(vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);									
(h) sites of significance relating to the history of slavery in South Africa									
(f) movable objects, including									
(i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens									
(ii) objects to which oral traditions are attached or which are associated with living heritage									
(iii) ethnographic art and objects									
(iv) military objects									
(v) objects of decorative or fine art									

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(vi) objects of scientific or technological interest; and									
(vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).									
Total for each criterion out of a possible 20 points									

6.2.2.4 Method of grading

The grading system as proposed in the National Heritage Resources Act Chapter 1, Part 1, Item 7(1) recommends Grade I for heritage of national importance, Grade II for heritage of provincial importance and Grade III for heritage of local importance. The South African National Heritage Agency is currently in the process of compiling the grading criteria for these purpose. However, to complete the systematics for cultural landscapes as being developed in this thesis, the following evaluation criteria for the grading system is proposed.

a. Evaluate for Local Significance.

Evaluation can be completed by the submission party or by a local authority. The premise is on identifying associative cultural landscapes that are large or small contiguous or non-contiguous areas and itineraries, routes, or other landscapes - these may be physical entities or mental images embedded in a people's spirituality, cultural tradition and practice. The attributes of associative cultural landscapes include the intangible, such as the acoustic, the kinetic and the olfactory, as well as the visual.

i. Step One.

Scan Table Thirteen. *List of terminology for identification of cultural heritage and associative cultural landscapes*, to determine with a yes or no answer the existence of a potentially significant aspect. Use the terminology to motivate evaluation for potential inclusion into local heritage resource inventory. Note that the indicated aspects may have a relationship to one another or may not have a relationship to one another based on various eras that the incidents became significant.

ii. Step Two.

Use the processes discussed in item 2.2 of this chapter regarding

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methods, of recording, documentation, archiving and verification to find information regarding the heritage.

iii. Step Three.

Scan Table Fifteen: *Relationship of criteria for evaluation of significance against proposed NHRA categories*, to determine whether a relationship between the listed item and the listed criteria exist.

iv. Step Four.

Assign a value of 1 for a positive relationship and a value of 0 to all others. (Only single categories and subcategories are checked, i.e. item g) graves and burial grounds are not checked since it is comprised of several sub-categories.)

v. Step Five

Add all the values together at the bottom of the table to determine the first and most prominent level of significance. The highest score would indicate the highest level of significance. This evaluation may also indicate several categories of relevance.

b. Evaluate for provincial significance.

In accordance with Article 4 of the Burra Charter³⁵⁸, the study of a place should make use of all relevant disciplines. It is thus recommended that professional heritage consultants be employed to produce a Motivated List to be considered for provincial significance.

Take the highest score out of a possible 20 points and rate according to the level of knowledge or authenticity that exist or that is obtainable for a particular category. The intention is to obtain a comprehensive view and description of a heritage. It is possible to suggest a system of rating that includes five levels of significance with each level receiving one point for relevance. (Table Sixteen)

Table Sixteen: Five levels of significance with points for relevance

	Level of Significance	Value
a.	Associated with one community.	1
b.	Associated with a region with more than one represented community.	1
c.	Level of deterioration is low and the significance of the place/landscape is certainly evident/visible, it may be tangible or intangible.	1
d.	The place or landscape is rare, unique, excellent example, or of high scientific value. Semple Kerr ³⁵⁹ also suggests the following criteria that may be considered.	1

³⁵⁸ http://www.icomos.org/docs/burra_charter.html 19/05/01 16:45 pm

³⁵⁹ Kerr. 1996.

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	<ul style="list-style-type: none"> i. The level of importance of the associated events or persons to the locality of the nation ii. The level of intimacy and duration of the association. iii. The extent in which evidence of the association survives, either in physical evidence at the place, or as evidence of impact of the place, on people or persons, literature and events iv. Intactness, or evocative quality of the place and its setting relative to the period of association. 	
e.	A bonus point is added if all four points above are relevant.	1
Note	<p>At least two points must be considered for the place/landscape to be of provincial significance.</p> <p>Five points make the place/landscape of high provincial importance and eligible for evaluation for national significance.</p>	

c. Evaluate for national significance.

Places/landscapes to be considered of national importance must meet the same standards as those to be considered for World Heritage Site nomination. (See this thesis Item 3.1.3.1) These sites are important to the nation as a whole and represent the uniqueness of the nation in the world context. A special panel of reviewers should be compiled from members in the Department of Environmental Affairs and Tourism, Department of Arts, Culture, Science and Technology, the Department of Foreign Affairs and the local representatives of international organisations such as UNESCO, ICOMOS, and IUCN.

It is recommended that only a Provincial Heritage Resources Authority (PHRA) may request on behalf of itself or on advice of the Premier to have a place/landscape evaluated for national significance. A team of professionals must be appointed by the province to prepare such as application.

6.2.2.5 Method of Management to include monitoring and maintenance.

a. Management

The management of a cultural landscape should be done according to performance criteria and should not be normative. Management decisions should consider both the natural and cultural characteristics and features of a landscape, the dynamics inherent in natural processes and continued use, and the concerns of traditionally associated peoples and must uphold the essence of the definition of cultural landscapes.

Local government faces the largest financial burden of tracking the cultural heritage of their communities. They are also generally poorly funded, depending on their tax base for their budget programmes, with social and upliftment programmes receiving priority. For this reason, it is recommended that the local authorities avoid ownership of cultural heritage and cultural landscapes. To assist in the

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identification and in serving as a sentinel group, it is recommended that local government set up advisory panels and review panels that are representative of persons in the community whose interest it is to retain the heritage of the community. Persons to serve on these panels could be chosen from the following groups:

- i. Heritage agencies,
- ii. Planners and planning agencies,
- iii. Historical, genealogical and cultural societies,
- iv. Tourism associations and tourism officers
- v. Local, provincial or national funding bodies,
- vi. Local council and staff
- vii. Ethnic communities and organisations
- viii. Political parties
- ix. Religious denominations and organisations
- x. Community organisations and associations.
- xi. Special interest groups,
- xii. Youth, woman and human rights groups,
- xiii. Sporting organisations,
- xiv. Arts and crafts organisations,
- xv. Environmental organisations
- xvi. Schools and academic institutions,
- xvii. Trade unions,
- xviii. Real estate associations.
- xix. Chambers of Commerce and progress organisations.

b. Heritage Resource Management Plan

A written Heritage Resource Management Plan is required for each site listed on a local level, on a provincial level and on a national level. A Heritage Resource Management Plan must include descriptions of the process and all the aspects of the systematics and must consist of at least the following components:

- i. A name or description.
- ii. A description of ownership and legal status.
- iii. Management responsibility.
- iv. An address and/or location plan with GPS co-ordinates.
- v. Property description.
- vi. Photographs and sketches of the place.
- vii. A motivational statement as discussed under this Chapter.
- viii. SAHRA evaluation (if so completed).

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- ix. A conservation policy.
- x. An implementation strategy.
- xi. A funding proposal.
- xii. Criteria of sustainability.
- xiii. A maintenance plan.
- xiv. A monitoring plan.
- xv. Research recommendations.

c. **Heritage Resource Management Plan principles.**

The Centre for Strategic Studies in Cultural Environment, Nature and Landscape History of the University of South Denmark³⁶⁰ has proposed a set of common goals in cultural landscape management. These are presented as useful guidelines for cultural landscape management in southern Africa.

- i. The focus of management should preserve significant physical attributes,
- ii. The focus of management should preserve significant biotic systems,
- iii. The focus of management should preserve significant uses when those uses contribute to significance.
- iv. Treatment decisions should be based on a cultural landscape's significance over time,
- v. Treatment decisions should be based on a cultural landscape's significant existing conditions,
- vi. The treatment implemented should be based on sound preservation practices to enable long- term preservation of a resource's features,
- vii. The treatment implemented should be based on sound preservation practices to enable long- term preservation of a resource's qualities,
- viii. The treatment implemented should be based on sound preservation practices to enable long- term preservation of a resource's materials.
- ix. The management approach must emphasise that the future utilisation of areas should be viewed according to cultural and natural sustainability in terms of its economical interests,
- x. The management approach must emphasise that the future utilisation of areas should be viewed according to cultural and natural sustainability in terms of its recreational interests,
- xi. The management approach must emphasise that the future utilisation of areas should be viewed according to cultural and natural sustainability in terms of its conservationist interests.

³⁶⁰ University of Southern Denmark. <http://www.sdu.dk/Hum/ForandLand/English/Goals.htm>5/15/01 5:24:22 PM

d. Conservation Policy

As part of the Heritage Resources Management Plan, and as stated in the Guidelines to the Burra Charter, the conservation policy should identify a management structure through which the conservation will be implemented. It should identify those to be responsible for subsequent conservation and management decisions and for the day-to-day management of the place.

The statement of conservation policy sets out how the conservation of the place may best be achieved. It should be tailored to the requirements of the particular place and should cover all the aspects of the place as defined by the National Heritage Resources Act. The statement could include the following³⁶¹:

- i. Physical conservation action and care necessary for the retention or recovery of significance.
- ii. Uses that are feasible and compatible or, where relevant, constraints on use.
- iii. Access - both to the public and by association, and interpretation.
- iv. Security mechanisms.
- v. Management of future development and changes.
- vi. Mechanism for decision-making.
- vii. Control of investigation and intervention.
- viii. Mechanism for adoption of policies.
- ix. The way in which the implementation of the conservation policy will or will not;
 - change the place including its setting,
 - affect its significance,
 - affect the locality and its amenity,
 - affect the client, owner and user; and
 - affect others involved.

e. Implementation strategy

Following preparation of the conservation policy a strategy for its implementation should be prepared. Strategy is an essential part of any conservation planning. The strategy should adhere to the following principles as suggested under the Land Care program of the Department of Agriculture:³⁶²

- i. Provide a framework for individuals, community organisation and the public

³⁶¹ Adopted from Kerr. 1996 p.14-15

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- and private sector, through partnerships to optimise productivity and sustainability of the natural and cultural resources through management, protection and rehabilitation.
- ii. Develop the capacity and skills of land users through education, knowledge sharing, information, participatory interaction for better access and management of resources.
 - iii. Support institutional building at all levels of governance for improved communication, networking, financial and other support services.
 - iv. Empower all people through knowledge and understanding to take the responsibility for the care of the natural and cultural resources.
 - v. Ensure as far as is practicable that resources are used at a rate within their capacity for renewal.
 - vi. Maintain and enhance the integrity of natural and cultural systems.
 - vii. Minimize or avoid risks that lead to irreversible damage.
 - viii. Maintain biodiversity (contribute towards the maintenance of biodiversity).

The strategy³⁶³ may include information about:

- i. the financial resources to be used;
- ii. the sequence of events,
- iii. the timing of events;
- iv. the management structure, and
- v. implementation of the conservation policy under changing circumstances, for example, availability of funds.

f. Maintenance and monitoring

There are three types of treatment for extant cultural landscapes by the USA National Park Service.³⁶⁴ It is recommended that these be adopted - with modifications - for the southern Africa cultural landscapes. These will be considered based on the desired outcome of the management strategy.

- i. Preservation. A cultural landscape should be preserved in its present condition if that condition allows for satisfactory protection, maintenance, use, and interpretation; or another treatment is warranted but cannot be accomplished until some future time.
- ii. Rehabilitation. A cultural landscape may be rehabilitated for contemporary use if:

³⁶² Gauteng DACEL. February 1999

³⁶³ Gauteng DACEL. February 1999

³⁶⁴ USA. National Park Service. 2000

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- It cannot adequately serve an appropriate use in its present condition; and
 - Rehabilitation will retain its essential features, and will not alter its integrity and character or conflict with approved park management objectives.
- iii. Restoration. A cultural landscape may be restored to an earlier appearance if:
- All changes after the proposed restoration period have been professionally evaluated, and the significance of those changes has been fully considered;
 - Restoration is essential to public understanding of the park's cultural associations;
 - Sufficient data about that landscape's earlier appearance exist to enable its accurate restoration; and the disturbance or loss of significant archaeological resources is minimized and mitigated by data recovery.

It is further recommended that an additional method be considered - that of adaptation³⁶⁵.

- iv. Adaptation - means to modify a place to suit proposed compatible uses. Adaptation is acceptable where the conservation of a place cannot otherwise be achieved, and where the adaptation does not substantially detract from its cultural significance.

As part of the monitoring and maintenance program, it is necessary to set, enforce, and monitor carrying capacities to limit public visitation to, or use of, cultural resources that would be subject to adverse effects from unrestricted levels of visitation or use. This should include:

- i. reviewing the conservation area purpose;
- ii. analysing existing visitor use of, and related impacts to, the cultural resources and traditional resource users;
- iii. prescribing indicators and specific standards for acceptable and sustainable visitor use; and
- iv. identifying ways to address and monitor unacceptable impacts resulting from overuse.

Studies to gather basic data and make recommendations on setting, enforcing, and monitoring carrying capacities for cultural resources should be conducted in collaboration with cultural resource specialists representing the appropriate disciplines.

³⁶⁵ Kerr. 1996. p.19

Biophysical cultural resources, which include plant and animal communities associated with the significance of a cultural landscape, should be duly considered in treatment and management. The cultural resource and natural resource components of the resource management plan should jointly identify acceptable plans for the management and treatment of biotic cultural resources. The treatment and management of biophysical cultural resources should anticipate and plan for the natural and human- induced processes of change. The degree to which change contributes to or compromises the character of a cultural landscape, and the way in which natural cycles influence the ecological processes within a landscape, should both be understood before any major treatment is undertaken. Treatment and management of a cultural landscape should establish acceptable parameters for change, and manage the biophysical resources within those parameters.

6.2.2.6 Recommendations for Research

The purpose of research must be clearly understood prior to making suggestions for further research on heritage place or cultural landscape. Leedy³⁶⁶ says that the reasons we do research is that:

- a. Everywhere our knowledge is incomplete and problems are waiting to be solved.
- b. We address the void in our knowledge, and those unresolved problems by asking relevant questions and seeking answers to them.
- c. The role of research is to provide a method for obtaining those answers by inquiringly studying the facts, within the parameters of the scientific method.

Research in the field of cultural landscapes and heritage management in South Africa is very young. Although various histories, archaeology, ethnology, and other related areas have been studied thoroughly for many years, the recognition of the importance of a combined history has only recently become understood. To facilitate the research in cultural landscapes, this thesis recommends an ordered approach to the research and documentation of the cultural landscapes. It is recommended that a similar system of Historic Themes³⁶⁷ as that being used in Australia be compiled that will allow the following advantages:

- a. assisting in helping think more widely about historical processes in assessing places,
- b. emphasising historical values of places rather than a fabric based assessment,
- c. assisting in structuring research,
- d. assisting in the preparation of interpretative texts,

³⁶⁶ Leedy. 1974. p.3

³⁶⁷ AHC. 2001

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- e. assisting in determining development controls,
- f. assist in justifying an assessment of historical significance to responsible authorities, and
- g. identifying the significance of a place as above threshold for establishing its statement of significance,

The themes should not override the categories of heritage significance of South Africa, but should be seen as being supplementary and complementary. The themes that are currently recognized are:

- a. Tracing the evolution of South African environment.
- b. Peopling of South Africa.
- c. Developing local, regional and national economies.
- d. Building settlements and cities.
- e. Working.
- f. Education.
- g. Governing.
- h. Developing South Africa's cultural life.
- i. Marking the phases of life.

Under these nine themes an extensive network of topics is included. (See **Appendix Sixteen** for those currently included in the framework of themes for Australia)

6.2.3 Application of systematics for South African cultural landscapes.

In order to establish credibility and to determine flaws or areas that would need revisions and improvements it was decided to test the proposed systematics for cultural landscapes in an application. The application would be of a current project rather than a hypothetical application to ensure that actual and true answers would be revealed. Each part of the proposal as described in Chapter Six Item 6.2.2 is applied and evaluated for both its value as a component in a systematics and to the extent the Pondoland cultural landscape mapping project could utilize the systematics.

The project that was selected as a test case study is the Pondoland Cultural Mapping project that was completed as part of the ENPAT 2002 contract between the University of Pretoria and the Department of Environmental Affairs and Tourism. It is necessary to test the definition proposed in this thesis (item 6.2.1), to determine compliance, and to verify the potential of recognising Pondoland as a cultural landscape. By dissecting the definition and then relating it to the case study area, a deduction is made as to the potential for recognition of the case study area as a cultural landscape or not. (Table Twenty Two)

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From the correlation it can safely be said that Pondoland can be considered as having potential for recognition as a significant cultural landscape.

Table Seventeen: Comparison between definition of cultural landscape and Pondoland cultural landscape

Proposed Definition	Applicable in Pondoland	Deduction as to recognition as a cultural landscape
Cultural landscapes are tangible	Pondoland has tangible cultural resources	Yes
Cultural landscapes are intangible.	Pondoland has intangible cultural resources	Yes
Cultural landscapes are dynamic,	Pondoland has dynamic cultural resources	Yes
Cultural landscapes are active.	The residents of Pondoland is active in cultural affairs	Yes
Cultural landscapes are living	The residents of Pondoland is active in cultural affairs	Yes
Cultural landscapes are inhabited	Pondoland is inhabited	Yes
Cultural landscapes are sacred or spiritual places	Pondoland has sacred or spiritual places	Yes
Cultural landscapes consist of an articulation between the biophysical setting, human transformations and the meanings of the resulting landscape.	Articulation between the biophysical setting, human transformations and the meanings of the resulting landscape can be established in Pondoland.	Yes
The meanings in cultural landscapes are expressed in events.	The meanings in cultural landscapes are expressed in events of the Mpondo	Yes
The meanings in cultural landscapes are expressed in activities.	The meanings in cultural landscapes are expressed in activities of the Mpondo.	Yes
The meanings in cultural landscapes are expressed in customs.	The meanings in cultural landscapes are expressed in customs of the Mpondo.	Yes
The meanings in cultural landscapes are expressed in beliefs.	The meanings in cultural landscapes are expressed in beliefs of the Mpondo.	Yes
The meanings in cultural landscapes are expressed in stories.	The meanings in cultural landscapes are expressed in stories of the Mpondo.	Yes
The meanings in cultural landscapes are expressed in myths.	The meanings in cultural landscapes are expressed in myths of the Mpondo.	Yes
The meanings in cultural landscapes can be applied to traditional artefactual residue.	The meanings in cultural landscapes can be applied to traditional artefactual residue of the Mpondo	Yes
The meanings in cultural landscapes can be applied to wilderness.	Has not been determined in Pondoland	No
The meanings in cultural landscapes can be applied to everyday landscapes.	Has not been determined in Pondoland	No
The meanings in cultural landscapes can be representative of national identity	Has not been determined in Pondoland	No
The meanings in cultural landscapes can be representative of cultural groups	Has not been determined in Pondoland	No
The meanings in cultural landscapes can be representative of single cultures.	The meanings in cultural landscapes can be representative of single cultures such as the Mpondo.	Yes

6.2.3.1 Selecting an appropriate vehicle for application.

As recommended in Chapter Five of this thesis the Environmental Potential Atlas (ENPAT) product administered by the Department of Environmental Affairs and Tourism is a suitable vehicle to expand for the systematics of cultural landscapes. The ENPAT vehicle was developed in the GIS Laboratory at the University of Pretoria under the leadership of Prof. Willem van Riet, the erstwhile Head of Department of Landscape Architecture. The data layers have gradually been added and expanded under the leadership of Gwen Breedlove,

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current project manager of ENPAT and author of this thesis. The author of this thesis has designed any and all concepts and databases used in ENPAT that is concerned with cultural mapping. A team of research assistants under her leadership, namely Liana Muller, Mwansa Saidi and Jean du Plessis, was responsible for data capturing. Two sets of data; that of forestry locations, and coastal household demographics were obtained from private companies, CSS, and Pondocorp respectively. In addition, Dr. Rehema White of the University of the Trankei in Umtata in collaboration with a large team, under the leadership of Dr. Julian Sturgeon, has completed the motivational studies for the inclusion of Pondoland into a National Park. The spatial data capturing (digitising), and viewer-setup has been completed by a private company GISBS (PTY) LTD, a division of ComparexAfrica under the project management of Dirk Nel with assistance from Susan Langenhoven, Ianko Thandeschi and Ivan Thandeschi.

The attributes of ENPAT that makes it a suitable vehicle or tool are:

- i. ENPAT is a framework of spatially represented information (maps) linked to: environmental management parameters
 - potential impacts of land use
- ii. The main purpose of ENPAT is to pro-actively identify areas of potential conflict between development proposals and critical or sensitive environments
- iii. ENPAT is presented on a generic Spatial Data Viewer that is easily accessible to most institutions and individuals.
- iv. ENPAT consist of two distinct parallel categories of information:
 - Environmental Characteristics
 - Socio-economic Factors
 - Management parameter are assigned to each of the sensitivity assessments. These can be displayed in an Environmental Management Framework Parameter Report. Management parameters: Reflect the standards, norms or values set by society for the management of environmental resources and features
 - They are pre-conditions (limitations) for development activities that may have potential harmful impacts on the environment
- vi. The impacts of development on specific sensitive features, or resources, are identified. These are displayed in a Feature Impact Report or a Category Impact Report.
- viii. ENPAT is completed on a provincial scale for eight of the nine provinces. It is also available for six metropolitan areas and nine conservation management areas at a scale of 1:50000. Detail information is made available at local city or town level.

a. GIS Data format³⁶⁸

The ENPAT GIS database is distributed in the micro computer (PC) version of ArcView™ Release 3.2 Shape File Format from Environmental Systems Research Institute (ESRI), Redlands, California, USA. All data sets comprising ENPAT are in the form of data shapefiles each of which contains the geographic and descriptive data. The format of the geographic data or graphics is the ArcView shape graphics format, and the descriptive data is stored in dBase™ format database files. Each data set is represented by the shape file itself with a .SHP extension, a spatial index file with a .SHX extension, and an associated attribute data file with a .DBF extension. The database is directly accessible by the ENPAT Spatial Data Viewer or ArcView GIS viewing and querying software.

The original objective was to provide ENPAT databases on a wide variety of hardware and software platforms, but the ArcView option was selected due to the wide user base of ARC/INFO™ GIS software in the field of natural resources management, and the subsequent release of low cost viewing programs for ARC/INFO data such as ArcView. The development of the shape file format and release of ESRI Map Objects Lite™ as a tool to develop essentially public domain dedicated viewing software, has negated this objective and releases of ENPAT databases on other hardware and software platforms are no longer envisaged. An ENPAT database can thus be considered a stand-alone package, free from the requirement of any third-party viewing software, which the user has to purchase additionally from a software developer or vendor.

b. GIS Data structure and data sets³⁶⁹

The GIS database consists of a series of ArcView shape files residing in a dedicated ENPAT sub directory. The land facet coverage be divided into digital map sheet shape files which can be viewed separately or, if required, in combination. The map sheet boundaries coincide with the 1:50000 scale topographic map series as issued by public sector mapping authorities. The database also includes a map sheet reference grid as well as major roads, railway lines and cadastral boundaries for orientation and reference.

c. Geographic mapping parameters

Most geographic data has been captured at a scale of 1:50 000. The ENPAT atlas

³⁶⁸ DEAT/ENPAT 2001 Help files

³⁶⁹ DEAT/ENPAT 2001 Help files

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as a whole is designed for use at scale not larger than 1:50 000.

All geographic data is in decimal degrees and if projected, it is recommended that it be represented in the Albers Equal Area projection system with central meridian 24 degrees East, standard parallels 18 degrees and 32 degrees South, map units expressed in meters with zero offsets in Y and X co-ordinates, positioned in the South-Eastern global quadrant. Limitations of the GIS database software to cater for the display of Southern Survey co-ordinates as commonly used in South Africa, necessitates the display thereof as Cartesian co-ordinates which simply means that Y and X co-ordinates are swapped and their numerical signs reversed. This is not a serious limitation and is not expected to pose any problems to users.

Information regarding all data shape files used for the establishment of ENPAT is provided through data fact sheets included on the CD-ROM in MS Excell97 Workbook format, named FACT.XLS. The following information regarding each data shape file is supplied:

- i. Data parameters
- ii. Map parameters
- iii. Supplier information
- iv. Copyright holder information
- v. Data policies
- vi. Update information

Data fact sheets for the following data shape files are provided:

- i. 1:50 000 Map sheet grid
- ii. Geology, landscape and soils combined
- iii. Rainfall
- iv. Rivers
- v. River catchment boundaries
- vi. Land cover
- vii. Land use
- viii. Roads
- ix. Railway lines
- x. Railway stations
- xi. Farm cadastral boundaries

d. Using The Enpat Database

Users will have to acquaint themselves with the operating procedure of the Spatial

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Data Viewer software in order to derive the maximum benefit from the atlas. Help on use of the software is covered in detail in the software help text. ENPAT can be viewed and queried through use of the dedicated ENPAT Spatial Data Viewer included in the database release

Apart from the value of the wide range of geographical data sets included in ENPAT, the database has been developed for inclusion of environmental factors in land use planning by identifying opportunities and constraints for various forms of land use types. Complex queries and selections can be made through use of the query builder and the results displayed as customised maps. These queries can be saved for future use and the maps printed on monochrome or colour printers. The descriptive database can be extended and manipulated, or exported to third party software such as dBase™, Lotus™, Access™, Excel™ or Quattro Pro™ for processing. Results of external processing can be reincorporated into the attribute data files for display if required.

e. Enpat Database Item Description

A series of approximately seventy database item or field names are used in the land facet database file. (**Appendix Seventeen**) Fields for the data categories used for geographic reference purposes are not listed.

f. Contributors to the ENPAT data to date

- i. Agricultural Research Council (ARC) - Pretoria.
- ii. Central Statistical Service (CSS) - Pretoria
- iii. Chief Director: Surveys and Land Information - Mowbray
- iv. Computing Centre for Water Research (CCWR) - Pietermaritzburg
- v. Council for GeoScience. - Pretoria
- vi. Council for Scientific and Industrial Research (CSIR) - Pretoria
- vii. Department of Agricultural Engineering - University of Natal - Pietermaritzburg
- viii. Department of Environmental Affairs and Tourism (DEAT) Pretoria.
- ix. Department of Water Affairs and Forestry (DWAF) - Pretoria
- x. Institute for Soil Climate and Water (ISCW) - Pretoria
- xi. Provincial Government: Mpumalanga Province - Nelspruit
- xii. University of Pretoria, Departments of Architecture, Botany, Geology, Soil Science, and Zoology.
- xiii. Water Research Commission - Pretoria

6.2.3.2 Application of the Pondoland Cultural Landscape Mapping.

The ENPAT 2002 research contract required the inclusion of cultural data from Pondoland into the existing data layers of the ENPAT 2000/2001 product. It was the responsibility of the research coordinator Gwen Breedlove and a research assistant Liana Muller to develop the appropriate data capturing methods and to indicate the various data layers that were to be graphically displayed. The following process as recommended under item 6.2.2 in this thesis was applied:

a. Method of identification

Table Thirteen was used to identify aspects of culture found in Pondoland. A total of one hundred and thirty three individual sites were visited and evaluated for presence of different aspects of culture. (**Appendix Eighteen**). Each aspect of culture that was found by observation, interview, or literature search in Pondoland was marked onto Table Thirteen and is presented in Table Eighteen as a shaded entry. The aspects of culture that was identified served as a topic of investigation and attempts were made to gather as much information as possible regarding each topic. The information was recorded, documented, archived and published as required by the proposed systematics.

Table Eighteen: List of terminology for identification of cultural heritage and cultural landscapes interpreted for Pondoland. (as presented in Table Thirteen)

Age groups	Ethics	Language	Sexual restrictions
Alphabet	Ethno-botany	Legal Structure	Singing
Ancestors	Expansion	Life styles	Slaves
Artistry	Fabrics	Luck superstition	Social standing
Athletics	Faith healing	Marriage	Soul concepts
Beliefs	Farming	Material use	Sports
Bio-physical features	Fire making	Mealtimes	Storage
Bio-physical threats	Food	Meaning	Story telling
Bodily adornment	Food taboos	Medicine	Struggles
Bravery	Funeral rites	Mining	Suicides
Chronology	Furniture	Music	Supernatural beings
Cleanliness	Games	Mystique	Superstition
Clothing	Gender	Obstetrics	Surgery
Communications	<i>Genius Loci</i>	Penal sanctions	Symbolism
Community organisation	Geographic location	Performance	Technology
Construction methods.	Gestures	Personal names	Threats
Co-operative Labour	Gift giving	Population policy	Tool making
Cosmology	Government	Possible extinction	Trade
Cultural links	Greetings	Postnatal care	Training
Currency	Habits	Pregnancy	Transportation
Dance	Hair styles	Products	Travelling

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Dates of discoveries	Head coverings	Property rights	Utensils
Defence	History of place	Propitiations of supernatural things	War
Descendants	Hospitality	Puberty customs	Waste
Divination	Household	Punishment	Water
Division of labour	Hunting	Recording events	Wealth
Domestic animals	Hygiene	Related settlements	Weaponry
Dream interpretation	Incest taboos	Relationships	Weather control
Drink	Inheritance rules	Religious rituals	Weaving
Education	Inspiration to others	Rites of Passage	Wildlife
Elderly	Joking	Rituals	Writing
Eschatology	Kinship nomenclature	Settlement pattern	

b. Method of recording, documentation, archiving and publishing

The proposed systematics suggests a relational model as applied to a geographic information system as the most suitable for the recording, compiling and managing of a database. The proposed systematics further suggests that a matrix can be created that indicates the relationship between the procedural requirements and the database requirements. This step was delayed because once tested, it was considered more valuable in determining the success of the systematics and as a checklist of the process than as an aide in the process. It is thus presented in the final evaluation of the systematics under item 6.3.2.3.

It was found necessary in completing the database to produce a user-friendly field worksheet that related to the type of information that was (or is) available rather than focussing on the data required by the National Heritage Resources Act. The list of data categories for the field worksheet that was produced focussed on setting up the relational correlation between the field data and possible spatial display options in the geographic information system. Various sources of data were identified on the worksheet to assist in the compilation of the data and to standardise the types and level of detail of the data that was gathered for each category. An indication of the method of display, such as a point, polygon or line is also included on the worksheet as a reminder to the fieldworker of the types of appropriate information for each category. A detailed base map at a scale of 1:50000 was provided onto which the data were recorded for input into the geographic information system. The field worksheet for cultural mapping data capturing is presented in Table Nineteen

The database was set up as an electronic database in Microsoft Access™. It is a generic database that could be used for any area that could require cultural

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mapping. (**Appendix Eighteen**). Additional data that are not necessary during field surveys, but that are required for a functional relational database were included in the electronic version.

In the acquisition and verification of the data the procedures and suggestions made in this thesis (items 6.2.2.2 a and b) were considered and followed to ensure that the most comprehensive data set was developed. The archiving of the data (item 6.2.2.2 c.) has not yet been completed since the process of compilation, display and storage is currently underway. It is anticipated however, that the archiving of the data by both the Department of Environmental Affairs and Tourism and the South African National Heritage Agency will be possible since the data is being compiled electronically and can be made available in any electronic format used by these institutions.

The data will be published in this thesis and will be available in the ENPAT 2002 by the end of June 2002. The Department of Environmental Affairs and Tourism holds the copyright to the data and the ENPAT 2002 product as indicated in the contract between the Department and the University of Pretoria.

Table Nineteen: Field worksheet for cultural mapping data capturing.

Item No	Category of data to be captured for each data point.	Responsibility or Source	Type of display
1	Current demographics with demarcated areas indicated.	SA Explorer - Census data	Polygon related to demarcated area
2	Current languages and distribution of the languages of the areas per EA.	SA Explorer - Census data	Polygon related to demarcated area
3	History of current towns and other settlements inside the study area or adjacent	Literature search	Point related to nearest town or settlement
4	History of communities in and adjacent to the study area.	Literature search and local survey	Point related to nearest town or settlement
5	Any archaeological finds and exploration in the area Compile a thorough sequence of history and events in the area	Literature search, Cultural History Museum, SAHRA or participating university	Point related to nearest town or settlement
6	Any historic buildings, artefacts or other national estate	SAHRA - provincial	Point related to nearest town or settlement
7	Activities of current daily lives. Review list as provided herewith and record information regarding any of the topics on the list.	Interviews at local community and literature search	Point, polygon or line related to item of interest
8	Activities of historic daily lives. Review list as provided herewith and record information regarding any of the topics on the list.	Interviews at local community and literature search and relevant university archives	Point, polygon or line related to item of interest
9	Recorded battles or battlefields at any time in the history of SA	SA Military History Museum, and literature search	Point, or polygon related to item of interest

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10	Any recorded prominent persons or groups of people in the area or adjacent	Local communities and literature search	Point related to item of interest
11	Chronological record of events, peoples and places. What was there, when and why?	Local communities and literature search	Point related to item of interest
12	Assign the categories of NHRA to item	Self	Point related to item of interest

c. Method of assessment and grading

The Pondoland area is not being considered for inclusion in the National Estate under the National Heritage Resources Act. However, the area is being considered for inclusion into a national park and the challenge is to recognise, verify and authenticate the heritage for possible recognition and inclusion as a cultural landscape by the Provincial Heritage Resources Authority. This thesis makes the argument that recognising only the biophysical characteristics of a region for inclusion into a national park gravely neglects and excludes the full potential of the area to be recognised for its overall value that must include its cultural significance.

As proposed in the thesis, the assessment procedure and the grading procedure were completed simultaneously and the steps as indicated in item 6.2.2.4 were followed in this assessment. To complete the process correctly, each data entry would have to be assessed and graded according to this proposal. However, in this exercise the entire Pondoland area is considered as a cultural landscape and is evaluated in its entirety. Only data that is known and could be verified are indicated in Table Fifteen as proposed in this thesis and is presented in Table Twenty. The evaluation for local significance as proposed in Item 6.2.2.2 a indicates that the following categories of the National Heritage Resources Act are the most evident from this study of Pondoland:

- a) places, buildings, structures and equipment of cultural significance*
- b) places to which oral traditions are attached or which are associated with living heritage (intangible)*
- (c) historical settlements and townscapes*
- (d) landscapes and natural features of cultural significance*
- (g) graves and burial grounds, including (i) ancestral graves and v) historical graves and cemeteries*
- (i) movable objects, including, (ii) objects to which oral traditions are attached or which are associated with living heritage and (iii) ethnographic art and objects*

The evaluation also indicates that the following criteria of significance of the National Heritage Resources Act are the most evident from this study of

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Pondoland:

(c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage

(d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects

(g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons

Criteria of lesser significance are:

(b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage

(e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group

(h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa

Table Twenty: Relationship of criteria for evaluation of significance against proposed National Heritage Resources Act categories. (as presented in Table Fifteen)

Relationship of Criteria for evaluation of significance against proposed National Heritage Resources Act categories. Chapter 1, Part 1 item 3(2) and (3)	(a) its importance in the community, or pattern of South Africa's history;	(b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage	(c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage	(d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects	(e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group	(f) its importance in demonstrating a high degree of creative or technical achievement at a particular period	(g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	(h) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa	(i) sites of significance relating to the history of slavery in South Africa
(a) places, buildings, structures and equipment of cultural significance	1	1	1	1	1	0	1	1	0
(b) places to which oral traditions are attached or which are associated with living heritage (intangible)	1	1	1	1	0	0	1	1	0
(c) historical settlements and townscapes	1	1	1	1	1	1	1	1	0
(d) landscapes and natural features of cultural significance	1	1	1	1	1	0	1	1	0
(e) geological sites of scientific or cultural importance	0	1	1	1	1	0	1	0	0
(f) archaeological and palaeontological sites	0	1	1	1	1	0	0	0	0
(g) graves and burial grounds, including									
(i) ancestral graves	0	0	0	0	0	0	1	1	0
(ii) royal graves and graves of traditional leaders	0	0	0	0	0	0	1	1	0
(iii) graves of victims of conflict	0	0	0	0	0	0	0	0	0

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(iv) graves of individuals designated by the Minister by notice in the <i>Gazette</i>	0	0	0	0	0	0	0	0	0
(v) historical graves and cemeteries; and	0	0	0	0	0	0	1	1	0
(vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);	0	0	0	0	0	0	0	0	0
(h) sites of significance relating to the history of slavery in South Africa	0	0	0	0	0	0	0	0	0
(i) movable objects, including									
(i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens	0	0	0	0	0	0	0	0	0
(ii) objects to which oral traditions are attached or which are associated with living heritage	0	0	1	1	0	0	0	0	0
(iii) ethnographic art and objects	0	0	1	1	0	0	0	0	0
(iv) military objects	0	0	0	0	0	0	0	0	0
(v) objects of decorative or fine art	0	0	0	0	0	0	0	0	0
(vi) objects of scientific or technological interest; and	0	0	0	0	0	0	0	0	0
(vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).	0	0	0	0	0	0	0	0	0
Total for each criterion out of a possible 20 points	4	6	8	8	5	1	8	7	0

Although the thesis recommends that a professional heritage consultant be appointed to produce a motivational list to be considered for provincial significance, it will be attempted in this application of the proposed systematics to make the determination. As per item 6.2.2.2 b, provincial significance should be determined by obtaining a comprehensive view and description of a heritage. Due to the fact that Pondoland is being reviewed in its entirety, the evaluation will thus be completed for the whole area. Table Sixteen is completed and presented as Table Twenty One to indicate the relevance and significance of the Pondoland cultural landscape. From the evaluation it can be stated that the Pondoland study area is of high provincial importance and that the area should be considered for evaluation of national importance. See Item 6.2.2.4 of this thesis for a discussion on the evaluation of a site for national significance.

Table Twenty One: Relevance and significance of the Pondoland cultural landscape.
(as presented in Table Sixteen)

	Level of Significance	Discussion	Value
a.	Associated with one community.	The Pondoland study area is comprised of 5 large towns and approximately 110 smaller settlements. The categories and criteria are associated each with at least one of the towns and one the settlements.	1
b.	Associated with a region with more than one represented community.	Pondoland is associated with the Mpondo tribal culture that has been in Pondoland since the first white settlers travelled to the area.	1
c.	Level of deterioration is low and the significance of the place/landscape is certainly evident/visible, it may be tangible or intangible.	Although the people are living subsistence lives, and the level of income is low in relationship with the country, the level of deterioration of the culture aspects of Pondoland is extremely low.	1
d.	The place or landscape is rare, unique, excellent example, or of high scientific value. Semple Kerr ³⁷⁰ also suggests the following criteria that may be considered. i. The level of importance of the associated events or persons to the locality of the nation ii. The level of intimacy and duration of the association. iii. The extent in which evidence of the association survives, either in physical evidence at the place, or as evidence of impact of the place, on people or persons, literature and events iv. Intactness, or evocative quality of the place and its setting relative to the period of association.	Because the study focussed on Pondoland and did not draw correlations to other areas, it is not possible without a further study to indicate whether the place or landscape is rare, unique, an excellent example, or of high scientific value. i. The level of importance of the persons can be indicated as being of national Importance of associated events cannot be indicated. ii. The duration of the association can be indicated as being for at least a century. Level of intimacy cannot be indicated. iii. The extent in which evidence of the association survives, can be indicated as surviving in the place, the people, literature and events. Intactness, or evocative quality of the place and its setting relative to the period of association cannot be indicated because the period of association is more than a century.	1
e.	A bonus point is added if all four points above are relevant.	All four points above are relevant to the Pondoland study area.	1
	NOTE: At least two points must be considered for the place/landscape to be of provincial significance. Five points make the place/landscape of high provincial importance and eligible for evaluation for national heritage significance.	It can be stated with confidence that the Pondoland study area is of high provincial importance and should be considered for evaluation for national heritage significance.	5

d. Method of management to include monitoring and maintenance.

The South African National Parks Board is considering the Pondoland area for establishment as a Schedule 1 National Park and as a Contractual National Park under the National Parks Act no 57 of 1976 items 2(1) and 2(1)(b) respectively. The Schedule 1 National Park³⁷¹ requires strict protection, free of consumptive exploitation, regulated tourism developments, serving as a core area for the greater park. The Contractual National Park³⁷² would be managed under agreement with

³⁷⁰ Kerr. 1996.

³⁷¹ White. 2002. p. 4

³⁷² White. 2002. p. 4

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the proprietor (community/other departments/private), serving as a buffer to the core areas, in which consumptive utilization of resources and activities (such as the harvesting of wildlife products; shellfish, wood products, medicinal plants etc. traditional livestock farming, hunting, fishing, and initially limited commercial agriculture) are managed in synchrony with the mission of the national park.

Although the motivation document³⁷³ recognises the economic benefits the people of the area would draw from the proposed Contractual National Park the area is not recognised for its significance as a cultural landscape. The entire motivational statement focuses on the value of the biodiversity of the area, in particular on the biomes, ecosystems and the Pondoland Centre of Endemism. The culture of the people and the cultural landscape within which the Mpondo people live are indicated as playing a role in the branding of the proposed park³⁷⁴, but are excluded from any other motivational statements for the park.

It is therefore recommended that the areas that have been identified as being culturally significant and that are located inside the boundaries of the proposed park be retained as cultural areas. Although some of these places are not inhabited, it is critical that those areas that are still inhabited be allowed to remain so. In recognising only the biophysical significance of Pondoland, the South African National Parks will disregard the Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO 1972.³⁷⁵

Since the South African National Parks will be responsible for the drafting of the Pondoland Cultural Heritage Management Plan, this application will not attempt to complete the management plan. It is recommended that the management plan must at minimum comprise of the following:

- i. An **Advisory and Review Panel** to be comprised of members such as mentioned in item 6.2.2.5 a, of the Proposed Systematics.
- ii. A written **Heritage Resource Management Plan** for each site and for Pondoland in its entirety to include aspects listed in Item 6.2.2.5 b, of the Proposed Systematics. The Heritage Resources Management Plan must comply with the principles as stated under item 6.2.2.5 c, of the Proposed Systematics.
- iii. A **Conservation Policy** for each individual heritage site and Pondoland in

³⁷³ White. 2002. p.5, 8, 9 and 14

³⁷⁴ White. 2002 p.3

³⁷⁵ <http://www.unesco.org/> 6/8/02 6:26:04 PM

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its entirety to include the elements as indicated in item 6.2.2.5 d, of the Proposed Systematics

- iv. An **Implementation Strategy** should adhere to the principles as suggested under the Land Care program of the Department of Agriculture:³⁷⁶ and as suggested in item 6.2.2.5 e, of the Proposed Systematics.

The maintenance and monitoring of the Pondoland cultural resources and the cultural landscapes will be the responsibility of the South African National Parks and will depend on the proposed management strategy for each of the sites and for Pondoland in its entirety. Four treatments are proposed under Item 6.2.2.5. f. It is recommended that all four the options are explored for the Pondoland cultural resources and landscapes and that the appropriate selections are made based on the findings of the Pondoland Cultural Heritage Management Plan. It is further recommended as stated under the same item in the proposed systematics that the carrying capacities of the various sites be determined and monitored to ensure the sustainable use of the resources.

The current ENPAT 2002 product does not allow for capturing the management or monitoring requirements into the database. To use the current system optimally it will be necessary to change the descriptive component of the database and to link it to a spatial component. This is an easy adjustment to make and could be completed by any geographic information system technician.

e. Recommendations for research.

The case study used in the application of the proposed systematics for cultural landscapes is a recently completed cultural mapping project completed by the author of this thesis. The project was completed over a four month period with the assistance of various persons as indicated in the introduction of the discussion under item 6.2.3.1. It was not the initial intention of the Pondoland study, as it was completed under the ENPAT 2002, to be incorporated into the systematics as herein proposed. However, the research was completed under the same structure and the completeness and appropriateness thereof can thus be scrutinised and compared with the proposed systematics.

Under item 6.2.2.6 of this thesis an approach to recommendations for research is discussed and to assist in a focussed approach, it is recommended the research be

³⁷⁶ Gauteng DACE. February 1999

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completed under applicable themes. It is possible to indicate which of the proposed themes have already been addresses from the application of the proposed systematics to the Pondoland study area. Table Twenty Two indicates whether the themes are applicable to Pondoland and which of the themes are recognized in the completed cultural landscape mapping. It is recommended that the themes where shortages are indicated be used as focus areas for further research.

Table Twenty Two: Proposed themes applicable and recognised in the Pondoland case study

	Proposed Theme	Applicability to Pondoland	Recognised in the Pondoland Cultural Landscape Mapping
a.	Tracing the evolution of South African environment.	Yes Due to the dominant Siliciclastic rocks of the area	No
b.	Peopling of South Africa.	Yes Due to the Mpondo people living in the area	Yes, However not satisfactory
c.	Developing local, regional and national economies.	Yes Due to the subsistence living tradition and the value of indigenous knowledge that can be gained from studying these practices	No
d.	Building settlements and cities.	Yes Due to the vernacular building style and use of materials	Yes, However not satisfactory
e.	Working.	Yes Due to the traditional division of labour	Yes, However not satisfactory
f.	Education.	Yes Due to the initiation traditions and the method of storytelling for integrating traditions.	No
g.	Governing.	Yes Due to the traditional tribal governing structure	Yes, However not satisfactory
h.	Developing South Africa's cultural life.	Yes Due to the traditional crafts, music and dancing of the Mpondo people	Yes, However not satisfactory
i.	Marking the phases of life.	Yes Due to the perpetuation and commitment to the traditional live and ways	Yes, However not satisfactory

The shortcomings in the research for Pondoland can also be identified from the evaluation completed in Tables Seventeen, Eighteen and Twenty. In short additional research is required on the following aspects of the Pondoland cultural landscape:

- i. The meanings in cultural landscapes as applied to wilderness.
- ii. The meanings in cultural landscapes as applied to everyday landscapes.
- iii. The meanings in cultural landscapes as representative of national identity.
- iv. The meanings in cultural landscapes as representative of cultural groups.
- v. Individual aspects of culture namely; alphabet, athletics, clothing,

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cooperative labour, cosmology, dates of discoveries, dream interpretation, ethics, expansion, fire making, food taboos, furniture, gender, hair styles, head coverings, incest taboos, legal structure, mealtimes, obstetrics, penal sanctions, population policy, possible extinction, postnatal care, pregnancy, sexual restrictions, slaves, soul concepts, suicides, surgery, technology, threats, tool making, utensils, waste, weaponry, weather control, and weaving.

- vi. Specific categories of the National Heritage Resources Act, namely:
- (e) geological sites of scientific or cultural importance*
 - (f) archaeological and palaeontological sites*
 - (g) graves and burial grounds, including (iii) graves of victims of conflict, (iv) graves of individuals designated by the Minister by notice in the Gazette, (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);*
 - (h) sites of significance relating to the history of slavery in South Africa*
 - (i) movable objects, including (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens, (iv) military objects, (v) objects of decorative or fine art (vi) objects of scientific or technological interest; and (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).*
- vii. Specific criteria of the National Heritage Resources Act, namely:
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period*
 - (i) sites of significance relating to the history of slavery in South Africa*

6.2.3.3 Final evaluation on the applicability of the proposed systematics.

The Proposed Systematics for South African Cultural Landscapes was satisfactorily applied to the Pondoland cultural landscape-mapping project. Table Fourteen established a relationship between the procedural requirements and the database requirements of the proposed systematics. By completing this table it is possible to determine to what extent the systematics was successfully completed.

Table Twenty Three is an indication of the relationships between procedural requirements and database requirements of the proposed systematics as applied to the Pondoland case study. Areas that could not successfully be completed form part of the management,

maintenance and monitoring aspects of both the procedures and the database requirements and can only be evaluated once the systematics are fully implemented in Pondoland. The relational database is successfully developed with both the spatial geographic information system component and the descriptive data components adequately captured and displayable. **(Appendix Eighteen)**

The project could be taken one step further by setting up the management and monitoring systems to sustainability indicators³⁷⁷ and to make all these components part of the descriptive and spatial databases. To make the proposed systematics as applied in the ENPAT 2002 fully functional as a cultural landscape decision-making system it is required to add a management or monitoring database component. A sustainability indicator system could be linked simultaneously.

Table Twenty Three: Relationships between procedural requirements and database requirements of the Proposed Systematics as applied to the Pondoland case study

Procedural Requirements	Database Requirements adequately accomplished	Acquisition and verification	Compilation	Storage	Updating and changing	Management and exchange	Manipulation	Retrieval and presentation	Analysis and combination
Identification		Yes	Yes	Yes	Yes	No	Yes	Yes	No
Recording		Yes	Yes	Yes	Yes	No	Yes	Yes	No
Assessment		Yes	Yes	Yes	Yes	No	Yes	Yes	No
Grading		Yes	Yes	Yes	Yes	No	No	No	No
Archiving		Yes	Yes	Yes	No	No	No	No	No
Management		No	No	No	No	No	No	No	No
Recommendations for research		Yes	No	No	No	No	No	No	No

6.4 Resolution of Hypothesis Five.

The combination of the results from the first four chapters of the thesis has proven to be successful in forming a systematics of the South African cultural landscapes, and for describing a set of displayable parameters.

The proposed systematics of the South African cultural landscapes can be successfully implemented in a case study as demonstrated with the Pondoland cultural mapping under the ENPAT 2002 project. Thus, the literature and the research support the hypothesis.

³⁷⁷ Sustainability indicators are required according to the Agenda 21 initiative, and are currently under development by DEAT for economic, social and biophysical characteristics on national, regional and local level.